



Review

Is laparoscopic surgery the best treatment in fistulas complicating diverticular disease of the sigmoid colon? A systematic review



Roberto Cirocchi ^a, Alberto Arezzo ^b, Claudio Renzi ^{c,*}, Giovanni Cochetti ^d, Vito D'Andrea ^e, Abe Fingerhut ^f, Ettore Mearini ^d, Gian Andrea Binda ^g

^a Department of Digestive Surgery and Liver Unit, University of Perugia, St Maria Hospital, Viale Tristano di Joannuccio, 1, 05100 Terni, Italy

^b Department of Surgical Sciences, University of Turin, C.So Dogliotti, 38, 10126 Torino, Italy

^c Department of General and Oncologic Surgery, University of Perugia, S. Andrea delle Fratte, Piazzale Menghini, 1, 06157 Perugia, Italy

^d Department of Surgical and Biomedical Science, Institute of Urological, Andrological Surgery and Minimally Invasive Techniques, University of Perugia, Viale Tristano di Joannuccio, 1, 05100 Terni, Italy

^e Department of Surgical Sciences, 'Sapienza' University of Rome, Viale Regina Elena 324, 00185 Rome, Italy

^f Section for Surgical Research (Prof Uranues), Department of Surgery, Medical University of Graz, Auenbruggerplatz 29, 8036 Graz, Austria

^g Department of General Surgery, Galliera Hospital, Mura Delle Cappuccine, 14, 16128 Genoa, Italy

HIGHLIGHTS

- Laparoscopy in diverticular fistula may reduce complications compared to open surgery.
- No significant difference for recurrence, early reintervention, need for diversion.
- Outcomes of laparoscopic primary anastomosis should be interpreted with caution.

ARTICLE INFO

Article history:

Received 4 May 2015

Received in revised form 1 November 2015

Accepted 5 November 2015

Available online 14 November 2015

Keywords:

Diverticular fistula

Diverticulitis

Laparoscopic surgery

Colon

Bladder

ABSTRACT

Introduction: Laparoscopic surgery is considered in the treatment of diverticular fistula for the possible reduction of overall morbidity and complication rate if compared to open surgery. Aim of this review is to assess the possible advantages deriving from a laparoscopic approach in the treatment of diverticular fistulas of the colon.

Methods: Studies presenting at least 10 adult patients who underwent laparoscopic surgery for sigmoid diverticular fistula were reviewed. Fistula recurrence, reintervention, Hartmann's procedure or proximal diversion, conversion to laparotomy were the outcomes considered.

Results: 11 non randomized studies were included. Rates of fistula recurrence (0.8%), early reintervention (30 days) (2%) and need for Hartmann's procedure or proximal diversion (1.4%) did not show significant difference between laparoscopy and open technique.

Discussion: there is still concern about which surgery in complicated diverticulitis should be preferred. Laparoscopic approach has led to less postoperative pain, shorter hospital stay, faster recovery and better cosmetic results. Laparoscopic resection and primary anastomosis is a possible approach to sigmoid fistulas but its advantages in terms of lower mortality rate and postoperative stay after colon resection with primary anastomosis should be interpreted with caution. When there is firm evidence supporting it, it is likely that minimally invasive surgery should become the standard approach for diverticular fistulas, thus achieving adequate exposure and better visualization of the surgical field.

Conclusion: The lack of RCTs, the small sample size, the heterogeneity of literature do not allow to draw statistically significant conclusions on the laparoscopic surgery for fistulas despite this approach is considered safe.

© 2015 IJS Publishing Group Limited. Published by Elsevier Ltd. All rights reserved.

* Corresponding author.

E-mail addresses: cirocchiroberto@yahoo.it (R. Cirocchi), alberto.arezzo@unito.it (A. Arezzo), renzicla@virgilio.it (C. Renzi), giovannicochetti@libero.it (G. Cochetti), vito.dandrea@uniroma1.it (V. D'Andrea), abefingerhut@aol.com (A. Fingerhut), ettore.mearini@unipg.it (E. Mearini), gian.andrea.binda@galliera.it (G.A. Binda).

1. Introduction

Colonic diverticular disease is widespread in Western countries and its incidence increases with aging. Whereas 80–85% of patients affected by diverticula remain asymptomatic, 15% develop symptomatic diverticular disease, but no inflammatory signs. About 10%–20% of individuals suffering from diverticulosis will have acute diverticulitis and only 2% develop complications of diverticulitis such as abscess, fistula, obstruction or hemorrhage [1,2]. Complications of diverticulitis include intra-abdominal perforation, external cutaneous fistulas or viscerovisceral fistulas (small bowel, kidney, uterus, bladder, vagina) or fistulas which penetrate in the retroperitoneal space. The majority of perforations and fistulas occurs in the sigmoid colon, the colonic tract most frequently involved by diverticula. Starting from the less frequent ones diverticular fistulas may present as colovaginal, coloenteric, colouterine, colocutaneous, or colovesical [3]. Management of diverticular fistulas is surgical since fistulas generally do not close spontaneously. Despite this the presence of a fistula is rarely an indication for urgent surgery. While open surgery is still the preferred way to approach acute diverticulitis and its complications, laparoscopy, initially reserved to uncomplicated diverticulitis [4], is gaining acceptance in the treatment of diverticular fistulas for the possible reduction of overall morbidity and better postoperative outcome and faster recovery when compared to open surgery [5,6].

Aim of the present review is to analyze the outcomes deriving from laparoscopic elective surgical treatment of diverticular fistulas of the colon.

2. Materials and methods

The methodology of the Preferred Reporting Items for Systematic reviews and Meta-Analysis (PRISMA) statement [7] was used.

2.1. Inclusion criteria

Published randomized and non-randomized studies in which at least 10 adult patients (age ≥ 18 years) underwent laparoscopic surgical treatment for colonic fistula secondary to sigmoid diverticular disease were included in this review.

2.2. Exclusion criteria

Studies were excluded from the analysis if the outcomes of interest were not reported or it was not possible to evaluate them based on the published results.

2.3. Interventions

Operations involving fully laparoscopic, laparoscopic assisted surgery, or hand-assisted laparoscopy surgery were included.

2.4. Systematic literature search

A systematic literature research for studies published in English between January 1991 and March 2015 was accomplished consulting EMBASE and PubMed databases.

The literature search in PubMed was performed using the string “colocutaneous AND fistula OR (coloenteric AND fistula) OR (colovaginal AND fistula) OR (colovesical AND fistula) OR (diverticular AND fistula)”.

Two authors independently performed online bibliography searches in order to identify titles and abstracts of interest. Full texts of relevant articles were further assessed for inclusion in the study. In the case of multiple trials enrolling the same patients, either the

most recent study or the one with the best methodological quality was included in the analysis.

2.5. Outcomes

Primary outcome

- Rate of fistula recurrence

Secondary outcomes

- Rate of reoperation for post-operative complications
- Rate of Hartmann's procedure or proximal diversion
- Rate of conversion to laparotomy

2.6. Data extraction

We developed a data extraction sheet based on the Cochrane Consumers and Communication Review Group's data extraction template [8]. Two authors (RC and CR) independently retrieved data of the included studies. A third author (GC) checked the extracted data. Disagreements were solved through discussion and, if necessary, by involving an independent fourth author (AA).

2.7. Statistical analysis

Two authors (CR and RC) performed the statistical analysis in line with recommendations from the PRISMA statement and the Cochrane Handbook for Systematic Reviews. Reported data were not homogeneous. For this reason we did not conduct a meta-analysis across studies. Instead, descriptive characteristics were reported for each article.

2.8. Assessment of methodological quality of the included studies

The included comparative studies were assessed by CR and RC for their methodological quality using the revised and modified grading system of the Scottish Intercollegiate Guidelines Network [9]. The included case series were assessed using the checklist for the quality of case series of the National Institute for Health and Clinical Excellence (NICE) [10].

3. Results

3.1. Search outcomes

The combined search strategy identified 1186 citations, of which 29 were judged to be potentially eligible based on title or abstract, or both, and the full texts were obtained. After a full text review, 18 studies were excluded [11–28] while 11 trials were judged to be eligible and were included in the review (Table 1) [29–39]. The PRISMA flow diagram for systematic review is presented in Fig. 1.

3.2. Characteristics of the included studies

Outcomes of the interventions concerned a total of 250 patients with 254 fistulas (Table 1): 188 colovesical fistulas, 45 colovaginal fistulas, 13 coloenteric, 6 colocutaneous, 1 colosalpingal and 1 colouterine. The majority of surgical interventions were performed with laparoscopic assisted technique [31,32,35,37,38], a few with fully laparoscopic technique [30,34,39] or hand-assisted technique [29,36].

Download English Version:

<https://daneshyari.com/en/article/4285790>

Download Persian Version:

<https://daneshyari.com/article/4285790>

[Daneshyari.com](https://daneshyari.com)